

Semester VIII

DISCIPLINE SPECIFIC ELECTIVE COURSE – DSE-8.1

Website Designing and Data Handling using Python

Offered by Computer Science Department, College of Vocational Studies

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course Title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
Website Designing and Data Handling using Python DSE-8.1	4	2	0	2	Pass in Class XII	NIL

Learning Objectives

The objective of this course is to provide understanding of Internet and websites to the students and make them well-versed with data handling using Python programming.

Learning Outcomes

After completion of the course, learners will be able to:

5. Explain the basic concepts and application of Internet.
6. Learn the elements of HTML and its applications.
7. Understand the features of CSS used to enhance the look-and-feel of a website.
8. Design a basic website using HTML and CSS.
9. Understand and apply Python programming constructs towards data handling.

SYLLABUS OF DSE-8.1

Unit 1: Basics of Internet and Website

5 hours

Internet History, Internet applications, WWW, Internet Service Provider (ISP), Dial-up, Broadband, Dedicated, DSL, DNS, Gateways, Routers and modems, Downloading and Uploading, Wi-Fi, Web security. Internet Domain and its registration. Web sites, Web pages, Home page, URL, IP address, Hyperlinks.

Internet Browsers and its features, Working of Hypertext Transfer Protocol (HTTP) and HTTPS.

Unit 2: Designing a basic Website

10 hours

Basics of Hypertext Markup Language (HTML): Elements – header, body, formatting, paragraph, line-break, image, links, button, lists, forms. Container and empty tags, checkbox, drop-down menu. Inserting tables.

Basics of Cascading Style Sheets (CSS): Concept of CSS, Creating CSS – Inline, internal, external, CSS Properties – background, border, color, dimensions, font, positioning, CSS Id and Class.

Create a basic website using HTML elements and CSS styling.

Unit 3: Data Handling using Python

15 hours

Python installation, Basic Terminal Commands, Structure of a Program, Simple Python Script Writing, script execution, debugging errors.

Identifiers and keywords; literals, numbers, and strings; Operators and expressions; Input and Output statements; control structures (conditional statements, loop control statements, break, Continue and pass).

Unit 4: Introduction to Functions and its definition (15 hours)

Introduction to Functions and its definition: Modules, built in and user-defined functions, passing arguments and returning values.

Python Libraries: Numpy, Pandas

Practical Exercises:

The learners are required to do practical exercise from unit 2 & 3.

Suggested Readings:

1. M.Srinivasan. (2012). “*Web Technology Theory and Practice*” Pearson
2. Raj Kamal. (2017). “*Internet and Web Technologies*” The Tata McGraw-Hill Publishing Company Limited.
3. Powell, T.A. (2017). “*HTML & CSS: The Complete Reference*” 5th edition, Tata McGrawHill.
4. Deitel, P. J. (2019). “*Python Fundamentals*” Pearson.
5. Thareja, R. (2017). “*Python programming using problem solving approach*” Oxford University Press.
6. University Press.

Notes:

3. Suggested readings shall be updated and uploaded on the college website from time to time.
4. Examination scheme and mode shall be as prescribed by the Examination branch, University of Delhi from time to time.

Semester VIII

Discipline Specific Elective- DSE-I 8.2

Advanced Prompt Engineering

Offered by Computer Science Department, College of Vocational Studies

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Credits	Lecture	Tutorial	Practical/Practice	Eligibility Criteria	Pre-requisite
4	2	0	2	12th Pass	Fundamentals of Prompt Engineering

Learning Objective

To develop advanced capabilities in designing, evaluating, and integrating prompts into real-world AI applications, with a strong emphasis on ethics, optimization, and domain-specific solutions.

Learning Outcomes

After completion of the course, learners will be able to: